

WHAT IS CLAIMED IS:

1. A power supply system which supplies electric power to an external device, comprising:

5 a fuel charging portion in which a fuel is charged; and

a power generation portion which can be attached to and detached from said fuel charging portion and generates the electric power by using said fuel supplied from said fuel charging portion.

10 2. The power supply system according to claim 1, wherein said power supply system can be attached to and detached from said external device without restraint.

3. The power supply system according to claim 1, wherein said power supply system is provided with a terminal which supplies electric power to said external device.

15 4. The power supply system according to claim 1, wherein said fuel charging portion has a degradable portion formed of a degradable material which can be transformed into one or a plurality of materials constituting soil in the natural world.

20 5. The power supply system according to claim 1, wherein said fuel charging portion has a degradable portion formed of a material which is degradable at least in the natural environment.

25 6. The power supply system according to claim 5, wherein said degradable portion is formed of a material

which can be degraded by contact with soil in the natural world.

7. The power supply system according to claim 6, wherein said degradable portion is formed of  
5 biodegradable plastic which can be degraded by microbes.

8. The power supply system according to claim 1, wherein said power generation portion is provided with a fuel cell which generates said electric power by the  
10 electrochemical reaction using said fuel supplied from said fuel charging portion.

9. The power supply system according to claim 8, wherein said fuel cell is a fuel reforming type fuel cell including a fuel reformer which reforms said fuel  
15 and extracts a specific component, a fuel electrode to which said specific component is supplied, and an air electrode to which oxygen is supplied.

10. The power supply system according to claim 9, wherein said fuel reformer is provided with at least  
20 one of a vapor reforming reaction portion, an aqueous shift reaction portion, and a selected oxidation reaction portion.

11. The power supply system according to claim 9, wherein said fuel reformer has a flow path whose depth  
25 and width are respectively not more than 500  $\mu\text{m}$ .

12. The power supply system according to claim 9, wherein said fuel reformer has a heater.

13. The power supply system according to claim 1,  
wherein said power generation portion has a holding  
portion which holds said fuel charging portion.

14. The power supply system according to claim 13,  
5 wherein said fuel charging portion has an exposed  
portion other than portions held by said holding  
portion of said power generation portion, and can take  
out said fuel charging portion from said power  
generation portion by the physical stress applied to  
10 said exposed portion.

15. The power supply system according to claim 13,  
wherein said fuel charging portion has an exposed  
portion other than portions held by said holding  
portion of said power generation portion, and can  
15 couple said fuel charging portion with said power  
generation portion by the physical stress applied to  
said exposed portion.

16. The power supply system according to claim 1,  
wherein said fuel charging portion includes: fuel  
20 feeding means for feeding said power generation fuel to  
said power generation portion; and by-product receiving  
means for receiving at least a part of a by-product  
generated in said power generation portion, and

wherein said power generation portion includes:  
25 fuel receiving means for receiving said power  
generation fuel fed from said fuel charting portion;  
and by-product feeding means for feeding at least a

part of a by-product generated at the time of power generation.

17. The power supply system according to claim 16, wherein, when said fuel charging portion and said power generation portion are coupled with each other, said fuel feeding means of said fuel charging portion is connected with said fuel receiving means of said power generation portion, and said by-product feeding means of said power generation portion is connected with said by-product receiving means of said fuel charging portion.

18. A fuel pack which has a space used for reserving a fuel, comprising:

a fuel case main body which can be coupled with and taken out from a power generation portion which generates power by using said fuel, and has an exposed portion which is exposed from said power generation portion when coupled with said power generation portion; and

a feed port which is used for supplying said fuel to said power generation portion.

19. The fuel pack according to claim 18, wherein said fuel pack can be taken out from said power generation portion by the physical stress applied to said exposed portion.

20. The fuel pack according to claim 18, wherein said fuel pack can be coupled with said power

generation portion by the physical stress applied to the exposed portion.

21. The fuel pack according to claim 18, wherein said fuel pack is provided with an intake port which is  
5 used for collecting a by-product generated by said power generation portion.

22. The fuel pack according to claim 18, wherein at least one of said fuel pack and said feed port includes biodegradable plastic.

10 23. The fuel pack according to claim 18, wherein at least a part of said fuel case is transparent.

24. The fuel pack according to claim 18, wherein said fuel case is a case to which a graduation used for measuring a quantity of said fuel is provided and which  
15 is at least partially transparent.

25. A fuel pack which has a space used for reserving a fuel, comprising:

a case which has a feed port used for exhausting said fuel to the outside and is formed of a  
20 biodegradable material.

26. The fuel pack according to claim 25, wherein said fuel pack further includes protecting means for separating a part of said case formed of a biodegradable material from degradation factors for  
25 degrading said part.

27. The fuel pack according to claim 26, wherein said protecting means made of a material which is not

degraded by said degradation factors for degrading said part of said case consisting of a biodegradable material.

5 28. The fuel pack according to claim 26, wherein said protecting means has a film which covers said part of said case consisting of a biodegradable material.

29. The fuel pack according to claim 26, wherein said protecting means can be removed from said case.

10 30. A power generator which supplies electric power to a load, comprising:

a power generation module for generating said electric power from a fuel;

15 a first interface which enables attachment and detachment of a fuel holding portion which has a space used for reserving said fuel to/from said power generation module, and is used for fetching said fuel from said fuel holding portion into said power generation module; and

20 a second interface which enables attachment and detachment of said power generation module to/from an external device which has said load, and is used for outputting electric power generated from said power generation module to said external device.

25 31. The power generator according to claim 30, wherein said power generator further includes a third interface which outputs residual quantity information of the fuel in said fuel holding portion to said

external device.

32. The power generator according to claim 30,  
wherein said power generator further includes a third  
interface to which drive information of said load is  
inputted.

33. The power generator according to claim 30,  
wherein said second interface includes a positive  
electrode terminal and a negative electrode terminal.

34. The power generator according to claim 30,  
wherein a gradation which can be an index of a residual  
quantity of said fuel in said fuel holding portion is  
provided to said power generator.

35. The power generator according to claim 30,  
wherein said power generation module includes a fuel  
cell which has a fuel reformer which reforms said fuel  
and extracts a specific component, a fuel electrode to  
which said specific component is supplied, and an air  
electrode to which oxygen is supplied.

36. The power generator according to claim 35,  
wherein said fuel reformer is provided with at least  
one of a vapor reforming reaction portion, an aqueous  
shift reaction portion, and a selected oxidation  
reaction portion.

37. The power generator according to claim 35,  
wherein said fuel reformer has a flow path whose depth  
and width are respectively not more than 500  $\mu\text{m}$ , and a  
heater which sets a space in said flow path to a

predetermined temperature.

38. The power generator according to claim 30,  
wherein said power generation module has a capacitor.

39. The power generator according to claim 30,  
5 wherein said first interface has an opening portion  
which exposes said fuel holding portion when said fuel  
holding portion is attached to said power generation  
module.

40. The power generator according to claim 39,  
10 wherein said first interface is configured to be  
capable of taking out said fuel charging portion from  
said power generation module by the physical stress  
applied to said opening portion.

41. The power generator according to claim 39,  
15 wherein said opening portion of said first interface  
has a first opening part and a second opening part  
opposed to said first opening part, and the first  
interface is so configured that said fuel charging  
portion is thrust out from said second opening part  
20 by the physical stress applied to said first opening  
part.

42. The power generator according to claim 39,  
wherein said first interface is configured to be  
capable of attaching said fuel charging portion to said  
25 power generation module by the physical stress applied  
to said opening portion.

43. A device driven with electric power,



comprising:

a load which functions with said electric power;  
and

5 a power supply system which can be attached to and  
detached from said device without restraint and  
supplies electric power generated from a fuel to said  
load.

44. The device according to claim 43, wherein said  
power supply system comprises:

10 a fuel charging portion in which said fuel is  
charged; and

a power generation portion which can be attached  
to and detached from said fuel charging portion without  
restraint, and generates said electric power by using  
15 said fuel supplied from said fuel charging portion.

45. The device according to claim 43, wherein said  
device has a computer.

46. The device according to claim 43, wherein said  
device has a display unit.

20 47. A power generator which generates power by  
using a fuel, comprising:

power generating means for generating power by  
using said fuel charged in detachable fuel charging  
means; and

25 controlling means for varying with time an output  
voltage supplied to a load by electric power generated  
by said power generating means.

48. The power generator according to claim 47,  
wherein said controlling means controls a change in  
said output voltage in accordance with a residual  
quantity of said fuel charged in said fuel charging  
means.

49. The power generator according to claim 47,  
wherein said controlling means further has detecting  
means for detecting a residual quantity of said fuel  
charged in said fuel charging means.

50. The power generator according to claim 47,  
wherein said controlling means controls said output  
voltage to lower as a residual quantity of said fuel  
charged in said fuel charging means is reduced.

51. The power generator according to claim 47,  
wherein said power generating means further includes a  
capacitor which can be charged with generated electric  
power.